BACKGROUND

CHK (Csk-homologous kinase), previously referred to as MATK (megakaryocyte-associated tyrosine kinase), and also called Hyl, Ntk, Ctk, Batk, or Lsk. The CHK protein, abundantly expressed in hematopoietic cells and in human brain, is composed of 527 amino acids, has an apparent molecular mass of 58 kDa, and shares 50% homology with the human Csk (C-terminal Src kinase). Like Csk, CHK contains SRC homology SH2 and SH3 domains, a catalytic domain, a unique N terminus, lack of myristylation signals, lack of a negative regulatory phosphorylation site, and lack of an autophosphorylation site. It is is abundantly expressed in marrow megakaryocytes and the brain.[1] CHK is thought to play a significant role in the signal transduction of hematopoietic cells. It is able to phosphorylate and inactivate Src family kinases, and may play an inhibitory role in the control of T-cell proliferation. It was found that CHK SH2 domain binds directly to c-KIT at the Tyr568/570 site and does not bind through intermediates such as FYN or SHC. Thus, it is likely that the biological effect of CHK in hematopoietic cells is through direct, site-specific binding to c-KIT.[2] Moreover, it was demonstrated that CHK is a novel signaling molecule that participates in TrkA signaling, associates directly with TrkA receptors upon NGF stimulation, and is involved in neurite outgrowth of PC12 cells in response to NGF.[3] In addition, it was found that CHK is expressed in human breast cancer but not in adjacent normal breast tissues. It might be involved in signaling in some cases of breast cancer.[4] CHK expression was regulated by cytokine in hematopoietic cells.[5] Three alternatively spliced transcript variants that encode different isoforms have been described for MATK.

References:
1. Jhun, B.H. et al: J. Biol. Chem. 270:9661-6, 1997
2. Price, D.J. et al: J. Biol. Chem. 272:5915-20, 1997
3. Yamashita, H. et al: J. Biol. Chem. 274:15059-65, 1999
4. Zrihan-Licht, S. et al: J. Biol. Chem. 272:1856-63, 1997
5. Grgurevich, S. et al: Growth Factors 14:103-115, 1997

TECHNICAL INFORMATION

Source:
CHK Antibody is a mouse monoclonal antibody raised against purified recombinant human CHK fragments expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous CHK proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

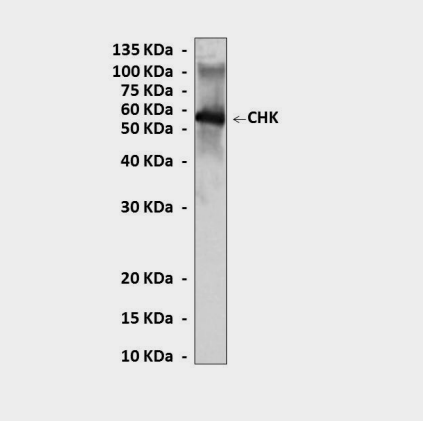
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

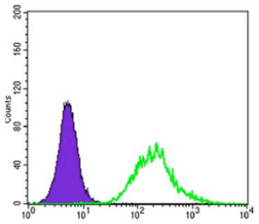
APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	n/d
ICC	n/d
FACS	1:200

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA





Top: Western Blot detection of CHK proteins in K562 cell lysate using CHK Antibody. **Bottom:** This antibody reacts specifically with CHK proteins in K562 cells in FACS analysis (CHK antibody: Green vs. Normal mouse IgG control: Purple).